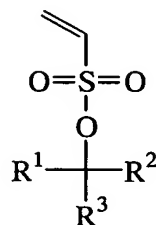


CLAIMS:

1. A sulfonate compound having the following general formula (1):



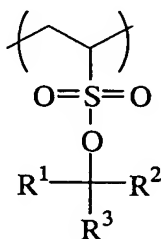
(1)

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wherein R^1 to R^3 each are hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, at least one of R^1 to R^3 contains fluorine, R^1 and R^2 , R^1 and R^3 , or R^2 and R^3 , taken together, may form a ring, each of R^1 to R^3 is a straight or branched alkylene or fluorinated alkylene group of 1 to 18 carbon atoms, preferably 1 to 10 carbon atoms, when they form a ring.

2. A polymer comprising recurring units of the following general formula (2) and having a weight average molecular weight of 1,000 to 500,000,

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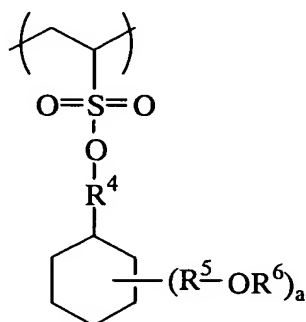
(2)

wherein R^1 to R^3 each are hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, at least one of R^1 to R^3 contains fluorine, R^1 and R^2 , R^1 and R^3 , or R^2 and R^3 , taken together, may form a ring, each of R^1 to R^3 is a straight or branched alkylene or

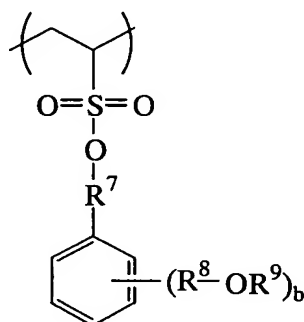
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fluorinated alkylene group of 1 to 18 carbon atoms,
preferably 1 to 10 carbon atoms, when they form a ring.

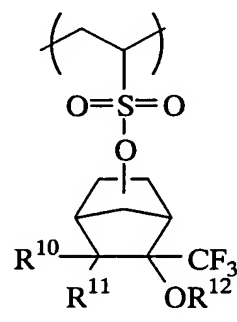
3. The polymer of claim 2, further comprising recurring
5 units of at least one type selected from the following
general formulae (3a) to (3f):



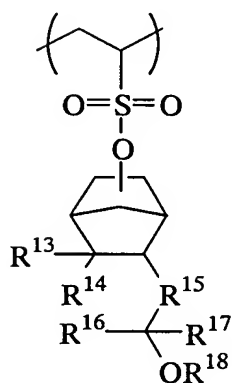
(3a)



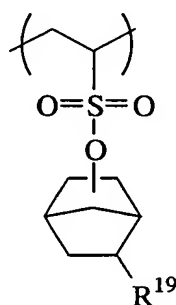
(3b)



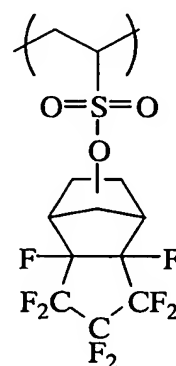
(3c)



(3d)



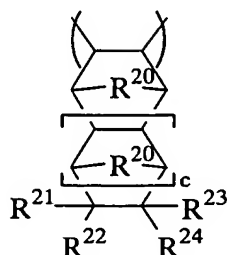
(3e)



(3f)

- wherein R^4 , R^5 , R^7 , R^8 and R^{15} each are a single bond or a
10 straight, branched or cyclic alkylene or fluorinated alkylene
group of 1 to 20 carbon atoms, R^6 , R^9 , R^{12} and R^{18} each are
hydrogen or an acid labile group, R^{10} , R^{11} , R^{13} , R^{14} , R^{16} and R^{17}
each are hydrogen, fluorine, a straight, branched or cyclic
alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, at
15 least one of R^{16} and R^{17} contains at least one fluorine atom,
 R^{19} is a straight, branched or cyclic fluorinated alkyl group
of 1 to 20 carbon atoms, "a" and "b" each are 1 or 2.

4. The polymer of claim 2, further comprising recurring units of the following general formula (4):

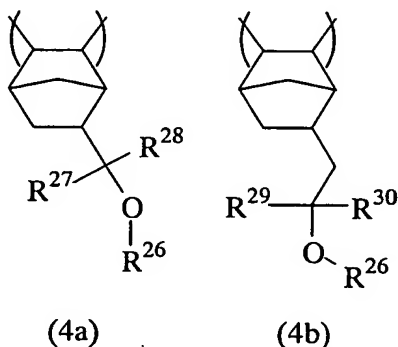


(4)

wherein R^{20} is a methylene group, oxygen atom or sulfur atom,
 R^{21} to R^{24} each are hydrogen, fluorine, $-R^{25}-OR^{26}$, $-R^{25}-CO_2R^{26}$ or
a straight, branched or cyclic alkyl or fluorinated alkyl
group of 1 to 20 carbon atoms, at least one of R^{21} to R^{24}
containing $-R^{25}-OR^{26}$ or $-R^{25}-CO_2R^{26}$, R^{25} is a single bond or a
straight, branched or cyclic alkylene or fluorinated alkylene
group of 1 to 20 carbon atoms, R^{26} is hydrogen, an acid
labile group, adhesive group or a straight, branched or
cyclic fluorinated alkyl group of 1 to 20 carbon atoms which
may contain a hydrophilic group such as hydroxyl, and c is 0
or 1.

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5. The polymer of claim 4 wherein said recurring units of
formula (4) have a structure of the following general formula
(4a) or (4b):



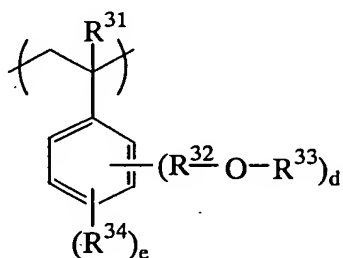
(4a)

(4b)

wherein R^{26} is as defined above, R^{27} to R^{30} each are hydrogen,
fluorine or an alkyl or fluorinated alkyl group of 1 to 4

carbon atoms, at least either one of R^{27} and R^{28} contains at least one fluorine atom, and at least either one of R^{29} and R^{30} contains at least one fluorine atom.

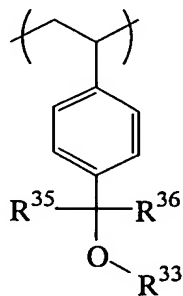
- 5 6. The polymer of claim 2, further comprising recurring units of the following general formula (5):



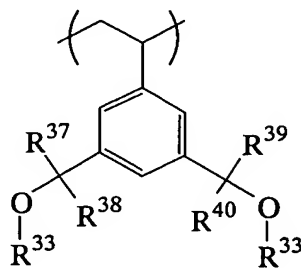
(5)

wherein R^{31} is hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, R^{32} is a single bond or a straight, branched or cyclic alkylene or fluorinated alkylene group of 1 to 20 carbon atoms, R^{33} is hydrogen or an acid labile group, R^{34} is fluorine or a straight, branched or cyclic fluorinated alkyl group of 1 to 20 carbon atoms, d is 1 or 2, and e is an integer of 0 to 4, satisfying $1 \leq d+e \leq 5$.

7. The polymer of claim 6 wherein the recurring units of formula (5) have the following formula (5a) or (5b):



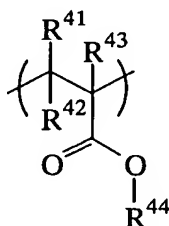
(5a)



(5b)

wherein R^{33} is as defined above, R^{35} to R^{40} each are hydrogen, fluorine or an alkyl or fluorinated alkyl group of 1 to 4 carbon atoms, at least either one of R^{35} and R^{36} contains at least one fluorine atom, at least either one of R^{37} and R^{38} contains at least one fluorine atom, and at least either one of R^{39} and R^{40} contains at least one fluorine atom.

8. The polymer of claim 2, further comprising recurring units of the following general formula (6):



(6)

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wherein R^{41} to R^{43} each are hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, and R^{44} is hydrogen, an acid labile group, an adhesive group or a straight, branched or cyclic fluorinated alkyl group of 1 to 20 carbon atoms which may contain a hydrophilic group such as hydroxyl.

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9. The polymer of claim 8 wherein R^{43} in formula (6) is trifluoromethyl.

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10. A resist composition comprising the polymer of claim 2.

11. A chemically amplified positive resist composition comprising

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- (A) the polymer of claim 2,
- (B) an organic solvent, and
- (C) a photoacid generator.

12. The resist composition of claim 11, further comprising (D) a basic compound.

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13. The resist composition of claim 11, further comprising (E) a dissolution inhibitor.

14. A process for forming a resist pattern comprising the
5 steps of:

applying the resist composition of claim 10 onto a substrate to form a coating,

heat treating the coating and then exposing it to high-energy radiation in a wavelength band of 100 to 180 nm
10 or 1 to 30 nm through a photomask, and

optionally heat treating the exposed coating and developing it with a developer.

15. The pattern forming process of claim 14 wherein the high-energy radiation is an F₂ laser beam, Ar₂ laser beam or soft x-ray.